
HPV Vaccination of women aged 16-26 in Virginia

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Overview

- **Background**
- **Survey design**
- **Survey results**
- **Conclusions**
- **Policy issues**

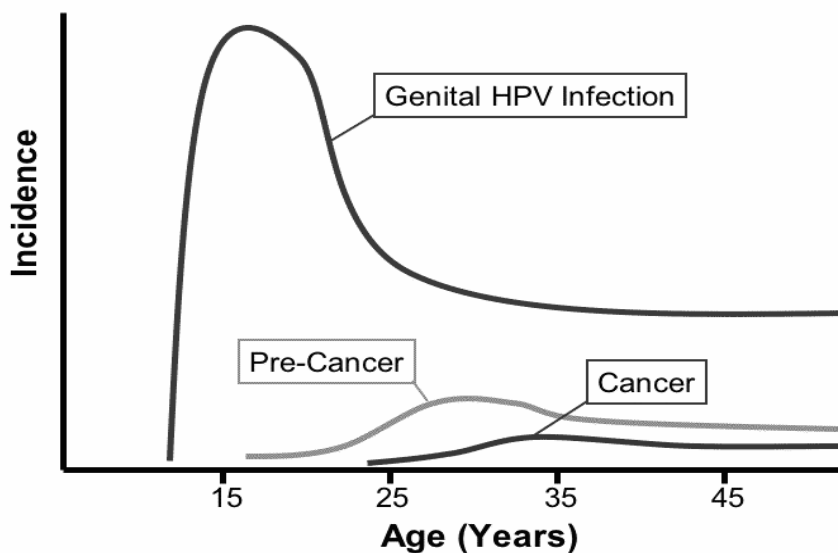
Human papillomavirus (HPV)

- **Most common sexually transmitted disease**
 - 6.2 million people infected each year¹
 - Prevalence 20 million cases in US¹
- **Lifetime risk: 80% for women by age 50**
- **Prevalence in sexually active teenagers: 64-82%²**
 - 28% of 14 year olds sexually active³

1. CDC. Genital HPV Infection. 2004
2. Fraser et al. Ped Infect Dis J 2005.
3. Grunbaum JA et al. MMWR 2004.

3

HPV disease incidence by patient age



<http://content.nejm.org/content/vol353/issue20/images/large/01f2.jpeg>

Governor's Task Force on Cervical Cancer Recommendations 2005

Hon. Jane H. Woods, Chair

- Implement a public health education campaign to address HPV and cervical cancer
- Explore opportunities to broaden funding for emerging technology
- Follow the CDC's Advisory Committee on Immunization Practices (ACIP) guidelines and if necessary, allocate funding.

The HPV Vaccine

- **Quadrivalent vaccine: Gardasil®** (Merck&Co, Inc.)
 - Approved by the FDA June 2006
 - Viral types 6,11,16,18
 - Tested in over 25,000 young women aged 9-26¹
 - 95% efficacy in preventing HPV infection
 - 98.5% efficacy in preventing persistent disease necessary for cervical cancer¹
 - Most efficacious if given before onset of sexual activity
 - Younger age at vaccination associated with more pronounced immune response

1.FUTURE II study group. NEJM 2007; 356:1915.

The HPV vaccine

- **Bivalent vaccine: Cervarix®** (GlaxoSmithKline)
 - Pending FDA approval
 - Viral types 16,18
 - Tested in over 30,000 women aged 15-25¹
 - 95% efficacy in prevention of first HPV infection
 - 100% efficacy in preventing persistent disease
 - Protection lasts at least 5 years
 - Studies ongoing evaluating cross-reactivity with other viral types

1. Harper DM et al. Lancet 2004; 364:1757.

Center for Disease Control

- **Advisory Committee on Immunization Practice (ACIP) Recommendation**
 - Routine vaccination of girls ages 11-12
 - Catch-up vaccination up to age 26

Current Coverage of the HPV vaccine

- 3 shot regimen costing \$120/injection or \$360 total
- Coverage \leq 18 years old
 - Public: Federal Vaccines for Children program for Medicaid qualifiers
 - Private: Most insurance companies cover but age range and reimbursements differ
- Coverage $>$ 18 years old
 - Public: No Medicaid allocation
 - Private: Most insurance companies cover but age range and reimbursements differ

9

Study focus: women ages 16-26

- Unaffected by recently passed school mandate
- Largest percentage of Virginia's uninsured aged 19-32
 - 77,000 Pap tests at VDH local health centers
 - 15,000 Pap tests performed at CHC
 - 41,000 women seen at Free Clinics for acute care
- No longer seen by a pediatrician
- Gynecology practices: poor compliance with vaccination programs

10

Gynecologists and vaccination

- Schrag et al 2003 – Vaccination practices among Ob-gyns
 - Only 10% offer all vaccines recommended to adult women
 - Despite recommendation for flu vaccine in pregnancy, only 44% gave routinely
 - 41% believe women should get vaccinated elsewhere
- Raley et al 2004 – Attitudes regarding HPV vaccine
 - Majority intend to provide HPV vaccine
 - < 60% of Ob-gyns routinely obtain vaccination information

11

Study objectives

- Identify barriers to patients, parents, and providers that prevent vaccination of young women
- Describe current distribution of the HPV vaccine in this age group
- Determine provider opinion regarding current and future policies to improve HPV vaccination rates

12

Survey design

- **Provider knowledge, attitudes, and behaviors regarding HPV vaccination for women aged 16-26**
- **Gynecologists and Family Practitioners**
 - 1000 subjects, 500 from each specialty, who currently practice in the state of Virginia
- **Tailored Design Survey Method conducted by Center for Survey Research at UVa**
- **Questionnaire included**
 - Demographics
 - HPV and vaccine related treatment experience
 - Barriers to vaccination
 - Policy opinion

13

Survey results

- **395 respondents**
 - 169 family practitioners
 - 216 ob-gyns
- **Response rate 45.4%**
- **Obstetrician-gynecologists and family practitioners similar in attitudes and behaviors related to HPV vaccine**

14

Demographics of providers surveyed

	FP	OB/Gyn	p-value
Age (mean)	49.1	47.9	0.372
Gender (%)			0.815
Male	60.6	61.8	
Female	39.4	38.2	
Years in practice (range)	28.3	16.7	0.114
Location of practice (%)			0.60
Urban	27	16.2	
Suburban	51.5	57.6	
Rural	17.2	22.9	
Other	4.3	3.3	
Practice size (%)			0.269
Solo practice	15.2	10.5	
Small group practice	36	36.7	
Large group practice	37.2	34.8	
Multi-specialty practice	4.3	9.0	
Other	7.3 ¹⁵	9.0	

Provider attitudes regarding HPV vaccine

POSITIVE

- 94% confident in vaccine's safety
- 94% confident in vaccine's efficacy
- 91% anticipate decreased rates of abnormal pap tests
- 92% anticipate decreased rates of cervical cancer

NEGATIVE

- 35% concerned about decreasing compliance with pap tests
- 26% concerned it will increase unprotected intercourse

Provider implementation of HPV vaccine

- 72% of providers currently offer the HPV vaccine
 - Another 16% plan to offer vaccine in the near future
- \$25-\$50 charge per injection on average over the cost of the vaccine
- Most common age of vaccination 19-22 years old
- 70.2% recommend the HPV vaccine to all women in this age range
 - 24.3% selectively recommend
 - 5.5 % never recommend

17

Factors associated with physician recommendation of HPV vaccine

- Logistic regression
 - Compared doctors who actively recommended the HPV vaccine to those who did not
 - More likely to be female
 - More likely to treat higher % public insurance pts
 - More experience treating HPV-related diseases
 - Compared doctors who offered the HPV vaccine in their practices to those who did not
 - Report less barriers to vaccination
 - More experience treating HPV diseases

18

Providers

Identified vaccination barriers

	% Responding “almost always” or “often”
<u>Inadequate reimbursement</u>	35.7%
Concern about increased likelihood of unprotected <u>Intercourse if vaccinated</u>	24.9%
<u>No vaccine in stock</u>	23.6%
Lack of time to adequately discuss	19.4%
Concern about earlier age <u>of sexual initiation if vaccinated</u>	14.3%
Lack of patient-oriented <u>educational materials</u>	9.6%
Concern about <u>vaccine efficacy</u>	4.3%
<u>Staff is too busy to vaccinate</u>	4.2%
Concern about <u>vaccine safety</u>	3.1%

Patient experience with HPV vaccine

- 36% of patients aged 16-26 have been vaccinated against HPV
 - 26% vaccinated in the provider’s office
 - 10% vaccinated elsewhere
- 12% have declined HPV vaccination
- 30% considering HPV vaccination

Patients

Identified vaccination barriers

	% Responding “almost always” or “often”
Cost	46.5%
Lacks awareness about HPV infection	43.0%
Concern about vaccine safety	19.4%
Lack of parental consent	11.0%
Concern about vaccine efficacy	10.4%
Stigma associated with an STI	5.4%
Opposes vaccination on religious/moral grounds	5.1%

21

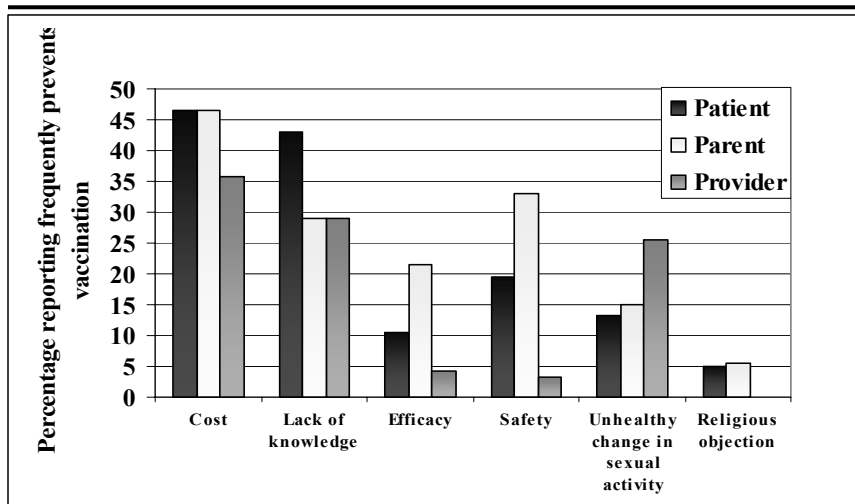
Parents

Identified vaccination barriers

	% Responding “almost always” or “often”
Cost	46.9%
Concerns about vaccine safety	31.5%
Lacks awareness about HPV infection	29.4%
Concerns about vaccine efficacy	20.7%
Concern that vaccination may be tacit approval of sexual intercourse	14.4%
Concern that vaccination may increase sexual risk-taking	10.6%
Stigma associated with an STI	6.6%
Opposes vaccination on religious/moral grounds	4.2%

22

Summary of Barriers to HPV vaccination



Provider views on HPV vaccine policies

Policy options	Providers in Favor
Health department vaccination programs	91%
School-based vaccination programs	54%
Mandatory insurance coverage	73%
Mandatory insurance coverage during postpartum care	74%

Provider view on Virginia's school mandate for HPV vaccination

Opinion	Percentage of providers
Strongly favor	37%
Somewhat favor	22.4%
Somewhat oppose	34%
Strongly oppose	0.8%
Other	6.4%

Overall 59.4% of providers support the school mandate

Conclusions

- **Cost and education remain significant barriers to HPV vaccination**
- **Vaccination refusal may be less prevalent than expected**
- **Providers support policies to improve HPV vaccination rates among women aged 16-26**

Current policy issues

- **Current funding allocation for the school mandate may be inadequate**
- **National leadership for school mandates in other states**
- **Health department based programs for vaccination of young women without coverage or access**
- **Mandatory insurance coverage**
- **Improved patient education**

27

“None of us is going to be satisfied if the only women getting the vaccine are the same women already covered by screening programs.”

**- John Schiller
National Cancer Institute**